

**Multi-mode Thickness gauge**  
**MODEL NO. MT180/MT190**



**APPLICATION**

The model MT180/MT190 is a multi-mode ultrasonic thickness gauge. Based on the same operating principles as SONAR, the instrument is capable of measuring the thickness of various materials with accuracy as high as 0.1/0.01 millimeters. The multi-mode feature of the gauge allows the user to toggle between pulse-echo mode (flaw and pit detection), and echo-echo mode (eliminate paint or coating thickness).

**KEY FEATURES**

- ✓ Two work modes: Standard testing mode & through coating mode.
- ✓ Capable of performing measurements on a wide range of material, including metals, plastic, ceramics, composites, epoxies, glass and other ultrasonic wave well-conductive materials.
- ✓ Transducer models are available for special application, including for coarse grain material and high temperature applications.
- ✓ Two-Point Calibration function. Probe-zero calibration.
- ✓ Coupling status indicator showing the coupling status.
- ✓ Output capacity: USB port, with Data software

**Transducer Selection**

Model	Freq.(MHz)	Dia.(mm)	Measuring Range	Lower limit	Description
P5EE	5	12	Echo-Echo mode: (3~30)mm for MT180, (3~60)mm for MT190.	Φ20mm×3.0mm	Trough Coating Measurement
N05	5	10	1mm~600.0mm(In Steel)	Φ20mm×3.0mm	Normal Measurement
N05/90°	5	10	1mm~600.0mm(In Steel)	Φ20mm×3.0mm	Normal Measurement
N07	7	6	0.65mm~200.0mm (In Steel)	Φ15mm×2.0mm	For thin pipe wall or small curvature pipe wall measurement
HT5	5	14	1~600mm (In Steel)	30mm	For high temperature (lower than 300° C) measurement.

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### SPECIFICATIONS

- \* Display: 4.5 digits LCD with EL backlight.
- \* Range: Pulse-Echo mode: (0.65~600)mm (in Steel).  
Echo-Echo mode: (3~30)mm for MT180, (3~60)mm for MT190.
- \* Sound Velocity Range: (1000~9999) m/s.
- \* Resolution: 0.1mm/0.01mm
- \* Accuracy:  $\pm (0.5\% \text{Thickness} + 0.01)$  mm, depends on materials and conditions
- \* Memory for up to 20 files (up to 99 values for each file) of stored values.
- \* Power Source: Two "AA" size, 1.5 Volt alkaline batteries. 100 hours typical operating time (EL backlight off).
- \* Communication: USB1.1.
- \* Outline dimensions: 150mmx74mmx32 mm.
- \* Weight: 245g
- \* Operating Temperature: -20°C~+60°C
- \* Storage Temperature: -30°C~+70°C
- \* Relative Humidity  $\leq 90\%$

#### **Main Functions**

- 1) Multi-mode: Pulse-Echo mode and Echo-Echo mode.
- 2) Capable of performing measurements on a wide range of material, including metals, plastic, ceramics, composites, epoxies, glass and other ultrasonic wave well-conductive materials.
- 3) Transducer models are available for special application, including for coarse grain material and high temperature applications.
- 4) Probe-Zero function, Sound-Velocity-Calibration function
- 5) Two-Point Calibration function.
- 6) Single point mode and Scan mode. Seven measurements readings per second in single point mode, and sixteen per second in Scan Mode.
- 7) Coupling status indicator showing the coupling status.
- 8) Units: Metric/Imperial unit selectable.
- 9) Battery information indicates the rest capacity of the battery.
- 10) Auto sleep and auto power off function to conserve battery life.
- 11) USB port, Optional software to process the memory data on the PC.



### ACCESSORIES

Standard accessories:

- \* Main body x 1pc;
- \* Transducer(P5EE) x 1pc;
- \* Couplant x 1
- \* Instrument case x 1pc
- \* Operating manual x 1pc
- \* Alkaline AA size battery x 2pcs

Optional accessories:

- \* Transducer: N05/90°/N05:5MHz,Dia.10mm;
- \* Transducer: N07:7MHz,Dia.6mm
- \* Transducer: HT5:5MHz,Dia.14mm
- \* Datapro software
- \* Communication cable: USB

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